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EXAMINER

MARKS, CHRISTINA M

ART UNIT	PAPER NUMBER
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3713

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DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,785

Applicant(s)

ROWE, RICK

Examiner

C. Marks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10, 12-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howington (US Application Publication 2002/01152120) in view of SCADA Technology (Lookout and CiTect Software) viewed collectively with Tufte (The Visual Display of Quantitative Information).

What Howington discloses has been discussed above and is incorporated herein.

Howington discloses generating a graphical representation of a gaming system that actually exists in a physical environment wherein the graphical representation includes elements representing one or more components in a gaming system. Howington further discloses that the system displays at least a portion of the graphical representation in a window of the GUI on a display device wherein each bar graph represents a displayed element. Howington further discloses that the user can select one or more of the elements in order to generate and display

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information regarding the components of the gaming system that are being represented by the graph element of the graphical representation.

Howington discloses the bar graphs representing the performance portions of the gaming system are the elements displayed. Though Howington discloses physical location coordinates associated with each element, Howington does not disclose that these elements are displayed in positions relative to one another corresponding to relative positions of said components of the gaming system in the physical environment that the elements represent.

CiTect SCADA Systems are designed to integrate the plant floor with business systems (CiTect, Plant2Business Solutions). Both CiTect and Lookout are Supervisory Control And Data Acquisition systems that allow the integration of a PC with graphic process and machine-status displays. (Technology Update: SCADA towards MES, page 2). A typical SCADA system integrates the plant floor with a PC and increasingly includes HMI (human/machine interface). The technology actually uses elements and graphic representations of the plant floor in order to graphically portray the elements in physical locations relative the positions in the actual plant (FIG 1). SCADA systems such as Lookout, automates reporting and statistical process control while integrating inventory management (Technology Update: SCADA towards MES, page 5). Lookout can be configured to a specific application to meet the needs and desires of the consumers (Technology Update: SCADA towards MES, page 6). Further, the entire plant area is monitored and controlled by Lookout wherein screen graphics symbolize and color-code the status of nearly 300 devices (Technology Update: SCADA towards MES, page 6) thus allowing customization to be able to display the elements to be displayed in positions relative to one another to represent the actual plant.

The disclosure of SCADA systems is an alternate way to present information when monitoring the status of a commercial area. One of ordinary skill in the art would thus find it

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obvious to incorporate the graphical representations of SCADA systems into the system of Howington. One of ordinary skill in the art would be motivated to make this incorporation in order to provide a more realistic display regarding the status of machines on the plant floor. By providing machines that are displayed and positioned corresponding to their actual location, a certain area could be monitored much easier than by coordinates only. This would reduce the computation work to find out which machine in the floor is actually being represented by Howington. Thus, the incorporation of the actual physical machines as a way to prompt the display of the information already gathered by Howington would have been an obvious design choice to one of ordinary skill in the art, as it is just an alternate visual display of the quantitative information. Further, it is notoriously well known in the art that users prefer systems which are 1) easier to use and 2) better looking. This goal would be met by the displays disclosed by SCADA and thus providing a more graphical and realistic looking system for the user would further obviate the incorporation of such displays over plain graphical displays.

Methods of displaying quantitative information are notoriously well known in the art and it is known to present information in a manner that is instantaneously recognizable and one of ordinary skill in the art would be readily enable to create a GUI based navigational format out of any textual information to present the information in a more user friendly manner. The manner in which the designer chooses to present the information is merely a design choice, motivated by the needs and desires of the system the designer is creating. Tufte evidences this fact in the following disclosure.

Tufte discloses that there are numerous ways to display quantitative information (Introduction), information such as performance data of a gaming machine as disclosed by Howington. Tufte defines this as the use of abstract pictures to show numbers as quantity, time-series, scatter plots, and multivariate displays. Tufte further explains that modern data

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graphics are instruments for reasoning about quantitative information. Further, Tufte states that the most effective way to describe, explore, and summarize a set of numbers is to look at pictures of those number as an effective way to describe a set of numbers (Introduction). Tufte also explains the goals in excellence of statistical graphics are to present complex ideas and numbers with clarity, precision and efficiency (page 13). Tufte explains the way to do this, as graphics reveal data, is to (page 13):

- ☐ show the data
- ☐ induce the viewer to think about the substance rather than the methodology
- ☐ avoid distortion
- ☐ present many numbers in a small space
- ☐ make the data sets coherent
- ☐ encourage the eye to compare different pieces of data
- ☐ reveal the data at several levels
- ☐ serve a clear purpose
- ☐ be closely integrated with the statistical and verbal descriptions

Tufte discloses the importance of aesthetics and technique in data graphical design and states that such designs often have a narrative quality, a story to be told about the data (page 177).

Tufte also asserts that the design for a graphic is a choice (pg. 191). The theory of visual display of quantitative information consists of principles that generate design options and guide choices among the options. What is to be sought in design for the display of information is the clear portrayal of complexity. Not the complication of the simple, but to give visual access to the information, to reveal the complex (page 191).

It would have been obvious to one of ordinary skill in the art to apply the multiple teachings about graphic excellence of Tufte into the chart shown by Howington to allow the user

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to view the performance of the components in a context that would be easier understood, the physical environment. Howington disclose a graph to allow the user to determine machine performance. However, this chart fails the goals of Tufte in that: it does not: induce the view to think about the substance, avoid distortion, make the data set coherent, encourage the eye to compare, reveal the data at several levels, or serve a clear purpose. One of ordinary skill in the art would thus be motivated to correct the deficiencies present in Howington based upon the teachings of Tufte. SCADA and its uses would provide such a means by showing the elements displayed as their actual machine displays corresponding to surrounding machines and the environment around. As shown by Tufte, the choice of the design used to correct these deficiencies would be that of the designer. However, based upon the suggestion of Tufte and the showing of using characters to represent position in Tufte, one of ordinary skill in the art would be motivated to display the information of the machine performance in a clear and concise way such as the graphical presentation of SCADA for a user to understand the placement/performance relationship. One of ordinary skill in the art would understand in applying these teachings to Howington, three dimensional characterizations of the machine representative to their location would be used as is done in SCADA and as would best serve the teachings of Tufte.

The motivation for doing this lies in the suggestion of such by the graphics of Tufte, but more importantly to meet the goals disclosed by Tufte for creating graphic excellence. By incorporating the display of the machines in the actual physical environment, the graphic (which would thus present the same information attempted by Howington.) would show the data, induce the viewer to concentrate on the substance of the data (how location affects performance) as opposed to the methodology (how each machine performs), avoid distortion by clearly presenting the data alongside the machine position, present the data for the machine in

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a small space, with the data being coherent and easily compared to other data relating to location, revealing the data at several levels (such as how the placement affects performance), while serving a clear purpose of identifying machine location without the graphical confusion present in Howington by merely using coordinates. Thus such a design choice for displaying the machines in a SCADA fashion would be obvious to a skilled artisan as a means to clearly display the quantitative information calculated in Howington for the reasons taught by Tufte and guided by a SCADA presentation wherein the information would be graphically portrayed to represent the actual system to dictate the relative positions and elements within the environment in sizes relative to one another to show the gaming system and physical environment in a way to accord with the Tufte teachings to best display the information obtained by Howington.

Regarding claim 2, SCADA systems allow the user to configure the display of the floor area in any manner they desire as a way to customize the area. FIG 1 (Technology Update: SCADA towards MES, page 1) shows how the system can allow the representation of at least a portion of the physical environment (tanks, pipelines, lights, etc). This customization is a design choice of the designer to best adhere to the requirements of their system wherein the designer would be motivated by the Tufte teachings to display the information in a manner where it could be best understood, thus representing the information in a manner that is most conducive to presenting it with clarity, including indicators to allow the user to readily identify the position of the machines relative to other information.

Regarding claim 3, the display of the elements is relative to a represented physical environment, as discussed above.

Regarding claim 4, SCADA systems allow information about the elements to be generated and displayed on the element itself (FIG 1). Howington discloses displaying the

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information in a window. One of ordinary skill in the art would certainly understand that it would be obvious to the combination of the references that when the machine is selected, a window could be incorporated to show the information as opposed to displaying it on the machine itself and such a concept would be an obvious design choice to a skilled artisan in order to relieve the clutter of having to put all the information on the machine.

Regarding claims 5-6, the elements and the actual display are remote from each other and information is thus retrieved remotely (from the element which is a component of the gaming system) when desired as the slot machine element sends the information to the display system.

Regarding claim 7, the system of Howington fully supports displaying a menu and navigation elements as discussed above.

Regarding claim 8, it would be obvious to the combination disclosed above that when the element is selected; the information gathered by Howington for the machine would be displayed as one of ordinary skill in the art would understand the purpose of displaying such machines as disclosed by SCADA is the ability to monitor such machines. Thus, the selection of the machine would axiomatically result in an application-initiating element in order to display the information obtained from the machine.

Regarding claim 9, SCADA discloses that each element can be a container element in itself by containing and displaying information relating to any parameter desired (FIG 1) that has been tracked and stored, which is done by the Howington system.

Regarding claim 10, one of ordinary skill in the art would understand that when applying the teachings of SCADA to the disclosure of Howington to incorporate a more visual system, the elements on the floor that would be monitored and thus displayed would be those of gaming machines.

Regarding claim 12, a sample of a SCADA screen is shown in FIG 1 (Technology Update: SCADA towards MES, page 1). Technology Update: SCADA towards MES further discloses that a SCADA system can monitor and graphically symbolize and color code nearly 300 devices. One of ordinary skill in the art would thus understand that a multitude of screens that could be navigated would need to be incorporated in order to portray the nearly 300 devices with the intended accuracy that is the basis of the system.

Regarding claim 14, Howington discloses the graphical user interface provides a number of menus wherein information about the machine can be obtained (FIG 7, Machine Menus).

Regarding claim 15, the user of Howington can navigate through the machines of the casino by selecting their graphical element and seeing their location information as they choose, thus the information given with each selection provides a navigation selectable element, as the user can determine where the machine is located from the selection.

Regarding claims 16-17, as discussed above, Howington generates a graphical user interface (GUI) and a graphical representation. Thus one of ordinary skill in the art would understand that means to generate a GUI and graphical representations are inherent to actually displaying a GUI and graphical representations.

Regarding claim 19, Howington also includes a server for storing in a high performance data warehouse patron data (paragraphs 6-10) disclosed to be used for tracking purposes (paragraph 22). The server is capable of sharing patron data with other systems as well as within their own organization. Thus the organization is computer controlled as defined above, thus the patron data would be part of the data used by the information host that controls the system.

Regarding claim 20, as disclosed above, the actual representations of the gaming machine would be obvious to the combination based on the teachings of Tufte and SCADA.

Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howington (US Application Publication 2002/01152120) in view of SCADA Technology (Lookout and CiTect Software) viewed collectively with Tufte (The Visual Display of Quantitative Information) further in view of Soltys et al. (US Patent No. 6,460,848).

What Howington and SCADA disclose has been discussed above and is incorporated herein.

Howington and SCADA disclose a system and method for management used to monitor a number of machines in the system. Howington embodies the system for gaming machines in a casino environment.

Howington and SCADA do not disclose a camera for collecting image information or to provide visual information regarding a portion of the gaming system. Howington and SCADA also do not disclose means for displaying the visual information collected. However, SCADA software allows the user to customize the image to include graphics and objects as well as the data information.

Soltys et al. teach that in a casino environment where the gaming is fast paced and large sums of money are trading hands, the casino becomes a likely target for cheating. For this reason, Soltys et al. disclose that it is very well known to employ a variety of security measures including cameras covering a gaming system to provide a live or taped video signal that personnel can closely examine. Information is generated from this camera and will help casinos detect fraud (Column 1, lines 59-67).

As camera surveillance is well known in the art, it would have been obvious to one of ordinary skill in the art to incorporate the camera surveillance as disclosed by Soltys et al. into

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the gaming system of Howington in view of SCADA. One of ordinary skill in the art would be motivated to do so in order to provide a security function to the casino monitoring system of Howington. Therefore, upon selection of a machine that is under suspicion, the personnel would be able to watch the surveillance feed to determine if fraud has occurred. This would provide the casino with a greater amount of security as well as the ability to better track fraudulent players and prevent stealing and cheating which is a major concern in casino security.

Response to Arguments

Regarding the Applicant's belief that SCADA is non-analogous art, the Examiner respectfully disagrees. The usage of SCADA is for a plurality of types of establishments with machines. The Examiner believes that simplifying its use to that defined by the Applicant is improper as even though those are uses of a SCADA system they definitely are not wholly representative of SCADA's overall capability. SCADA itself means Supervisory Control and Data Acquisition, lending itself to a plurality of uses. As per the Applicant's request as to why someone in the gaming industry would look to SCADA, the Examiner points the Applicant to the cited reference The Visual Display of Quantitative Information. This reference, cited and described previously by the Examiner, states "*Design is choice. The theory of visual display of quantitative information consists of principles that generate design options ... What is to be sought in designs for the display of information is the clear portrayal of complexity. Not the complication of the simple; rather the designer is to give visual access to the subtle and the difficult, that is the revelation of the complex.*" SCADA is the clear portrayal of the complex. It takes information regarding numerous machines and graphical displays it to simply reveal the information. The disclosure of The Visual Display of Quantitative Information would lead a skilled artisan in information presentation to use the software for viewing information relating to

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the gaming machine as it provides a simplistic and detailed way to view complex information in accordance with the teachings of The Visual Display of Quantitative Information.

Regarding the Applicant's argument that SCADA does not disclose a graphical user interface for allowing a user of the interface to understand the performance of a gaming system within a context of a physical environment, the Examiner respectfully disagrees. SCADA is used to model physical environments and therefore its application would result in the system disclosed by Howington be represented as such.

Regarding the Applicant's argument that SCADA does not graphically represent the physical environment, the Examiner respectfully disagrees. SCADA does model the actual environment (see FIG 1, the pipes and the machines all present in relation to each other in a room) and has the capability to add any background information desired. The models created by SCADA can be as simple or as advanced as desired based on the amount of information required by the designer and thus its application to Howington would allow for any physical environment to be displayed, including three-dimensional.

Regarding Applicant's argument that the combination is improper, the Examiner respectfully disagrees, as the argument is moot in grounds of the new rejection presented above clarifying and detailing the motivation. Through Tufte, disclosed above in the rejection, the Examiner has provided a reference that teaches how better display leads to better information presentation thus monitoring.

Regarding Applicant's argument that Howington teaches away from the invention, the Examiner respectfully disagrees as just because Howington currently doesn't disclose the display of the machines, it most certainly does not teach away from it solely by not disclosing it. There is not disclosure in Howington that states such and the Applicant's statement is merely conclusionary and is thus not convincing as it fails to point out exactly where Howington teaches

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away besides from the mere ascertain that because Howington does not disclose the information it is teaching away.


Regarding Applicant's argument that SCADA is non-analogous art, the Examiner respectfully disagrees as disclosed above. SCADA is not limited solely to the manufacturing art as argued above.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Marks whose telephone number is (703)-305-7497. The examiner can normally be reached on Monday - Thursday (7:30AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa J Walberg can be reached on (703)-308-1327. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


cmm
March 30, 2004


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